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Natural Resources Conservation Service

Montana Basin Outlook Report January 1, 1998

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How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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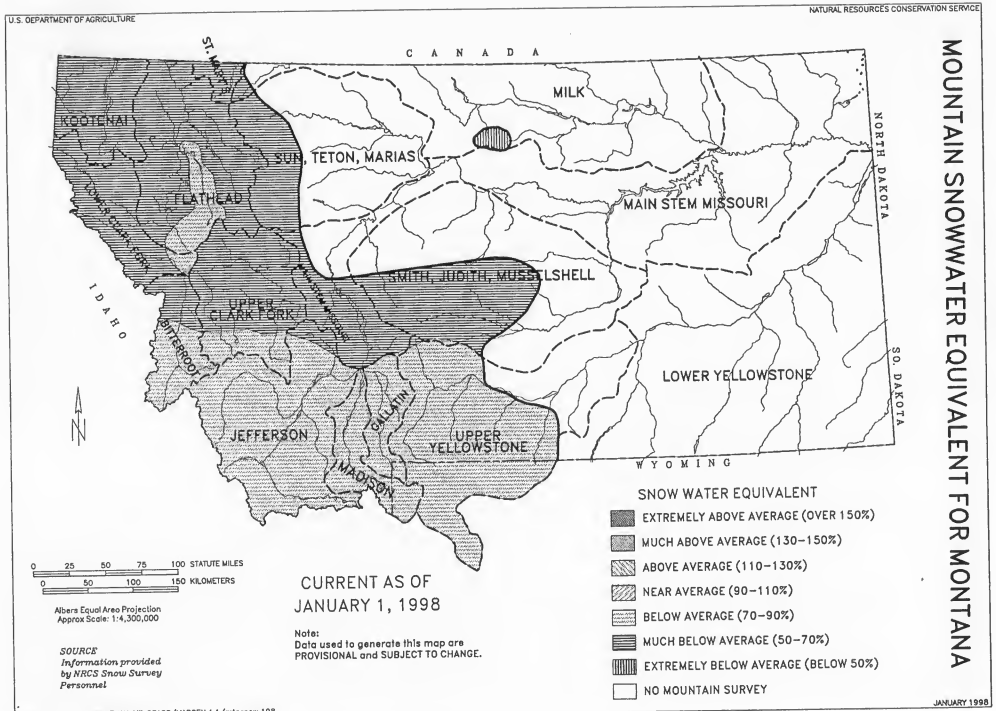
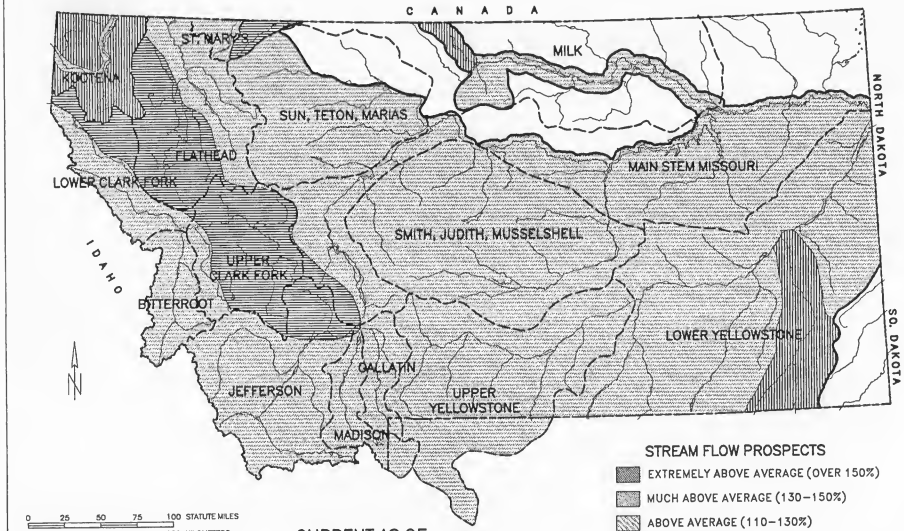

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
MOUNTAIN SNOWWATER EQUIVALENT FOR MONTANA
CANADA
ST. MARY
MILK
KOOTENAI
SUN, TETON, MARIAS
FLATHEAD
NORTH DAKOTA
MAIN STEM MISSOURI
KOOTENAI-FISHER
SMITH, JUDITH, MUSSELSHELL
IDAHO
UPPER CLARK FORK
BITTERROOT
LOWER YELLOWSTONE
SO. DAKOTA
JEFFERSON
GALLATIN
UPPER YELLOWSTONE
MADISON
WYOMING
N
0 25 50 75 100 STATUTE MILES
0 50 100 150 KILOMETERS
Albers Equal Area Projection
Approx Scale: 1:4,300,000
SOURCE
Information provided by NRCS Snow Survey Personnel
CURRENT AS OF JANUARY 1, 1998
Note:
Data used to generate this map are PROVISIONAL and SUBJECT TO CHANGE.
SNOW WATER EQUIVALENT
EXTREMELY ABOVE AVERAGE (OVER 150%)
MUCH ABOVE AVERAGE (130–150%)
ABOVE AVERAGE (110–130%)
NEAR AVERAGE (90–110%)
BELOW AVERAGE (70–90%)
MUCH BELOW AVERAGE (50–70%)
EXTREMELY BELOW AVERAGE (BELOW 50%)
NO MOUNTAIN SURVEY
NRCS STATE OFFICE, BOZEMAN, MT. GRASS/MAPGEN 4.1/mtsnow.198
JANUARY 1998

U.S. DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

STREAM FLOW PROSPECTS FOR MONTANA

Spring and Summer Period



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JANUARY 1998

Montana Water Supply Outlook Report as of January 1, 1998

Weather patterns coming into Montana have been mainly been occurring in the southwest and northwest regions. Temperatures and precipitation amounts have been variable across the state. Most major river basins snowpack has gotten off to a very slow start and typical for what climatologists associate with a strong El Nino event.

Snowpack

As of January 1, mountain snow water contents were ranging from below to well below average and about one-third to one-half of last year at this time. Snow water content across Montana was 69 percent of average and 36 percent of last year. West of the Continental Divide, snowpack was 68 percent of average and 35 percent of last year and East of the continental Divide, snowpack was 76 percent of average and 41 percent of last year. By this time in the winter, there should be 40 to 45 percent of our winter snowpack in place, generally leaving more than one-half of the season's snow still to come.

Snowpack extremes were the highest in the Tongue River Basin at 95 percent of average and 56 percent of last year, and the lowest in the Musselshell River Basin at 53 percent of average and 32 percent of last year.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
COLUMBIA	68	35
KOOTENAI	66	36
FLATHEAD	66	34
UPPER CLARK FORK	72	37
BITTERROOT	83	40
LOWER CLARK FORK	65	29
MISSOURI	70	38
MISSOURI HEADWATERS	73	38
JEFFERSON	77	43
MADISON	69	33
GALLATIN	73	40
MISSOURI MAINSTEM	61	35
HEADWATERS MAINSTEM	65	38
SMITH-JUDITH-MUSSELSHELL	61	36
SUN-TETON-MARIAS	66	34
MAINSTEM ABOVE FT. PECK RES	66	37
MILK	32	21
ST. MARY	63	37
ST. MARY & MILK	53	33
YELLOWSTONE	85	48
UPPER YELLOWSTONE	77	40
LOWER YELLOWSTONE (WYOMING)	91	56
WIND	91	51
SHOSHONE	85	45
BIGHORN	91	56
TONGUE	95	75
POWDER	82	61

BASIN SUMMARY OF SNOW COURSE DATA

JANUARY 1998

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
MONTANA						
ALBRO LAKE PILLOW	8300	1/01/98	---	6.1	17.1	--
ASHLEY LAKE	4000	12/31/97	6	1.3	5.8	2.4
ASHLEY DIVIDE	4820	12/31/97	9	1.5	6.6	3.4
BADGER PASS PILLOW	6900	1/01/98	---	10.7	23.4	14.2
BANFIELD MTN PILLOW	5600	1/01/98	---	4.4	18.4	9.0
BARKER LAKES PILLOW	8250	1/01/98	---	5.0	10.7	6.8
BASIN CREEK PILLOW	7180	1/01/98	---	4.6	5.2	3.6
BASSOO PEAK	5150	12/30/97	11	1.8	12.0	--
BEAGLE SPGS PILLOW	8850	1/01/98	---	3.7	6.3	3.7
BEAVER CREEK PILLOW	7850	1/01/98	---	5.6	16.9	7.9
BISSON CREEK PILLOW	4920	1/01/98	---	3.8	11.1	3.9
BLACK BEAR PILLOW	7950	1/01/98	---	12.7	38.6	15.6
BLACK PINE PILLOW	7100	1/01/98	---	2.7	9.4	4.9
BLACKTAIL	5650	1/05/98	16	3.1	13.1	5.8
BLOODY DICK PILLOW	7550	1/01/98	---	4.8	10.9	5.1
BOULDER MTN PILLOW	7950	1/01/98	---	5.5	16.3	8.4
BOX CANYON PILLOW	6700	1/01/98	---	3.0	9.0	4.8
BOXELDER CREEK	5100	12/26/97	7	1.1	4.9	4.3
BRACKETT CR PILLOW	7320	1/01/98	---	5.9	15.2	8.5
CALVERT CR PILLOW	6430	1/01/98	---	3.1	10.6	4.1
CARROT BASIN PILLOW	9000	1/01/98	---	9.4	24.5	11.9
CHESSMAN RESERVOIR	6200	12/31/97	0	.0	2.8	1.5
CLOVER MDW PILLOW	8800	1/01/98	---	6.3	10.3	7.9
COLE CREEK PILLOW	7850	1/01/98	---	7.1	9.8	7.7
COMBINATION PILLOW	5600	1/01/98	---	1.7	5.3	2.3
COPPER BOTTOM PILLOW	5200	1/01/98	---	1.9	12.2	4.7
COPPER CAMP PILLOW	6950	1/01/98	---	8.5	24.1	13.6
COYOTE HILL	4200	12/30/97	11	2.0	10.8	4.1
CRYSTAL LAKE PILLOW	6050	1/01/98	---	4.1	7.8	5.3
DAISY PEAK	7600	12/29/97	11	2.0	8.2	5.1
DAISY PEAK	7600	12/29/97	11	2.0	8.2	5.1
DALY CREEK PILLOW	5780	1/01/98	---	4.3	10.7	5.3
DARKHORSE LK. PILLOW	8700	1/01/98	---	10.0	22.1	15.5
DEADMAN CR PILLOW	6450	1/01/98	---	3.1	8.4	4.4
DISCOVERY BASIN	7050	12/29/97	16	2.7	8.9	4.4
DIVIDE PILLOW	7800	1/01/98	---	2.9	8.0	4.8
DIX HILL	6400	12/28/97	12	2.2	9.8	5.0
DUPUYER CREEK PILLOW	5750	1/01/98	---	1.3	8.0	4.8
EMERY CREEK PILLOW	4350	1/01/98	---	3.8	14.7	7.2
FISHER CREEK PILLOW	9100	1/01/98	---	12.9	34.2	15.6
FLATTOP MTN PILLOW	6300	1/01/98	---	14.4	33.3	21.0
FROHNER MDWS PILLOW	6480	1/01/98	---	1.9	6.1	3.4
GARVER CREEK PILLOW	4250	1/01/98	---	4.6	12.4	5.1

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
GRAVE CRK PILLOW	4300	1/01/98	---	4.4	14.4	7.7
GRIFFIN CR DIVIDE	5150	12/30/97	10	1.2	12.2	--
HAND CREEK PILLOW	5030	1/01/98	---	3.7	12.4	5.5
HAWKINS LAKE PILLOW	6450	1/01/98	---	6.0	20.3	13.0
HEBGEN DAM	6550	12/29/97	16	2.6	9.1	4.9
HELL ROARING DIVIDE	5770	12/29/97	34	6.5	21.1	13.0
HOLBROOK	4530	12/31/97	5	.8	9.0	4.0
HOODOO BASIN PILLOW	6050	1/01/98	---	12.3	40.6	19.0
JOHNSON PARK	6450	12/29/97	7	.9	6.2	3.3
KIWANIS CAMP	3720	12/26/97	0	.0	2.3	1.1
KRAFT CREEK PILLOW	4750	1/01/98	---	4.3	15.5	6.6
LAKEVIEW RDG. PILLOW	7400	1/01/98	---	2.4	9.4	5.4
LEMHI RIDGE PILLOW	8100	1/01/98	---	4.6	5.9	4.4
LICK CREEK PILLOW	6860	1/01/98	---	3.9	7.7	5.6
LONE MOUNTAIN PILLOW	8880	1/01/98	---	6.4	14.3	7.5
LOWER TWIN PILLOW	7900	1/01/98	---	6.0	15.5	9.5
LUBRECHT PILLOW	4680	1/01/98	---	1.9	6.9	2.4
LUBRECHT FOREST NO 3	5450	12/29/97	6	1.3	7.0	2.6
LUBRECHT FOREST NO 4	4650	12/29/97	2	.5	5.4	1.4
LUBRECHT FOREST NO 6	4040	12/29/97	1	.4	6.4	1.6
LUBRECHT HYDROPLOT	4200	12/29/97	5	1.2	7.1	2.8
MADISON PLT PILLOW	7750	1/01/98	---	6.5	24.1	10.1
MANY GLACIER PILLOW	4900	1/01/98	---	3.3	14.6	7.3
MARIAS PASS	5250	12/31/97	16	4.0	16.2	6.7
MAYNARD CREEK	6210	12/30/97	13	3.3	11.7	5.8
MONUMENT PK PILLOW	8850	1/01/98	---	8.3	18.5	9.5
MOSS PEAK PILLOW	6780	1/01/98	---	10.4	31.8	16.1
MT LOCKHART PILLOW	6400	1/01/98	---	7.7	15.8	8.8
MULE CREEK PILLOW	8300	1/01/98	---	5.8	12.3	6.8
NEVADA CREEK PILLOW	6480	1/01/98	---	4.2	11.6	5.7
NEVADA RIDGE PILLOW	7020	1/01/98	---	5.0	11.3	8.0
NEZ PERCE CMP PILLOW	5650	1/01/98	---	5.0	12.2	5.7
NOISY BASIN PILLOW	6040	1/01/98	---	13.4	36.6	17.2
N.F. ELK CR PILLOW	6250	1/01/98	---	3.7	10.3	4.6
NF JOCKO PILLOW	6330	1/01/98	---	15.2	32.1	19.1
N.E. ENTRANCE PILLOW	7350	1/01/98	---	2.3	6.9	4.0
OPHIR PARK	7150	12/28/97	18	3.8	11.7	7.0
PETERSON MEADOWS	7200	12/29/97	16	3.9	7.9	4.2
PICKFOOT CRK PILLOW	6650	1/01/98	---	1.9	9.7	4.9
PIKE CREEK PILLOW	5930	1/01/98	---	7.5	22.8	11.4
PIPESTONE PASS	7200	12/31/97	8	2.0	4.8	2.1
PLACER BASIN PILLOW	8830	1/01/98	---	7.1	13.9	9.4
PORCUPINE PILLOW	6500	1/01/98	---	3.5	6.7	3.2
ROCKER PEAK PILLOW	8000	1/01/98	---	5.3	10.2	6.4
ROCKY BOY PILLOW	4700	1/01/98	---	2.0	3.5	2.2
ROCKY BOY	4700	12/26/97	2	.3	2.9	1.8
SACAJAWEA	6550	12/30/97	17	4.4	--	--
SADDLE MTN PILLOW	7900	1/01/98	---	9.5	21.4	11.1
SHORT CREEK PILLOW	7000	1/01/98	---	2.1	3.7	2.5
SHOWER FALLS PILLOW	8100	1/01/98	---	9.2	15.0	10.4

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-90
SILVER RUN PILLOW	6630	1/01/98	---	2.1	4.8	2.0
SKALKAHO PILLOW	7260	1/01/98	---	8.1	21.1	9.8
S.F. SHIELDS PILLOW	8100	1/01/98	---	5.5	15.2	7.5
SPOTTED BEAR MTN.	7000	12/31/97	16	3.0	11.3	6.6
SPUR PARK PILLOW	8100	1/01/98	---	7.0	14.7	9.8
SQUAW PEAK PILLOW	6150	1/01/98	---	4.5	16.5	6.1
STAHL PEAK PILLOW	6030	1/01/98	---	12.2	26.4	16.0
STORM LAKE	7780	12/29/97	23	5.4	9.3	5.4
STUART MOUNTAIN	7400	12/31/97	37	10.6	28.9	13.4
STUART MOUNTAIN PILL	7400	1/01/98	---	10.0	25.3	12.6
SUCKER CREEK	3960	12/26/97	0	.0	1.3	.6
TAYLOR ROAD	4080	12/26/97	4	.4	2.9	2.0
TEN MILE LOWER	6600	12/31/97	8	1.0	5.6	3.0
TEN MILE MIDDLE	6800	12/31/97	12	2.6	7.0	4.7
TEPEE CREEK PILLOW	8000	1/01/98	---	4.5	11.3	5.7
TIZER BASIN PILLOW	6840	1/01/98	---	4.2	7.1	4.8
TRINKUS LAKE	6100	12/31/97	40	10.4	36.0	18.7
TRUMAN CREEK	4060	1/03/98	6	1.2	4.1	2.0
TV MOUNTAIN	6800	12/31/97	19	5.6	18.0	7.2
TWELVEMILE PILLOW	5600	1/01/98	---	6.5	17.2	7.2
TWENTY-ONE MILE	7150	12/31/97	21	4.2	14.0	7.3
TWIN LAKES PILLOW	6400	1/01/98	---	14.5	31.4	16.3
UPPER HOLLAND LAKE	6200	12/31/97	41	11.8	25.4	15.8
WALDRON PILLOW	5600	1/01/98	---	3.6	10.5	5.0
WARM SPRINGS PILLOW	7800	1/01/98	---	8.6	14.8	9.4
WEASEL DIVIDE	5450	1/02/98	42	9.7	25.3	15.3
WEST YELLOWSTONE	6700	12/31/97	14	2.6	11.4	4.8
WHISKEY CREEK PILLOW	6800	1/01/98	---	4.1	15.0	7.0
WHITE MILL PILLOW	8700	1/01/98	---	10.4	23.3	11.4
WOOD CREEK PILLOW	5960	1/01/98	---	1.7	9.3	4.4

Precipitation

December mountain and valley precipitation across the state was 48 percent below average and 78 percent below last year, while the water year precipitation was 18 percent below average and 52 percent below last year.

West of the Continental Divide, December mountain and valley precipitation was 46 percent below average and 77 percent below last year and the water year precipitation was 18 percent below average and 50 percent below last year. East of the Divide, December mountain and valley precipitation was 51 percent below average and 78 percent below last year and the water year precipitation was 18 percent below average and 54 percent below last year.

RIVER BASIN	DECEMBER % OF AVERAGE	WATER YEAR % OF AVERAGE
COLUMBIA	49	82
KOOTENAI	45	77
FLATHEAD	53	79
UPPER CLARK FORK	43	86
BITTERROOT	55	98
LOWER CLARK FORK	50	80
MISSOURI	50	80
JEFFERSON	50	88
MADISON	50	80
GALLATIN	54	75
MISSOURI MAINSTEM	36	84
SMITH-JUDITH-MUSSELSHELL	58	69
SUN-TETON-MARIAS	47	80
MILK	65	75
ST. MARY	59	77
YELLOWSTONE	80	92
UPPER YELLOWSTONE	65	87
LOWER YELLOWSTONE (WYOMING)	93	99
WIND	103	92
SHOSHONE	71	103
BIGHORN	94	99
TONGUE	125	113
POWDER	110	98

Reservoirs

Major reservoir storages statewide were 7 percent above average and 6 percent above last year.

Reservoir storage west of the Continental Divide was 5 percent above average and 5 percent above last year. East of the Continental Divide, reservoir storages were 13 percent above average and 9 percent above last year.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
COLUMBIA	105	105
KOOTENAI	124	110
FLATHEAD	91	100
UPPER CLARK FORK	108	127
BITTERROOT	82	142
LOWER CLARK FORK	103	105
MISSOURI	113	109
JEFFERSON	112	103
MADISON	113	107
GALLATIN	168	83
MISSOURI MAINSTEM	105	107
SMITH-JUDITH-MUSSELSHELL	155	155
SUN-TETON-MARIAS	129	113
MILK	121	106
ST. MARY	121	111
YELLOWSTONE	106	106
UPPER YELLOWSTONE	100	96
LOWER YELLOWSTONE	106	106

Streamflow

Streamflow forecasts across Montana are 29 percent below average and 46 percent below last years forecasts.

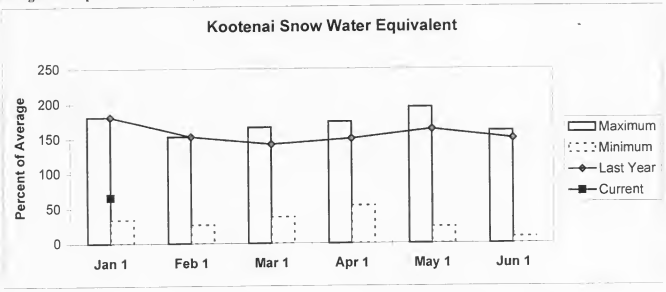
West of the Continental Divide, streamflows are forecast to be 22 percent below average and 43 percent below last years forecasts. East of the Continental Divide, streamflows are forecast to be 35 percent above average and 36 percent above last years forecasts.

RIVER BASIN	FORECASTS % OF AVERAGE	FORECASTS % OF LAST YEAR
COLUMBIA	78	57
KOOTENAI	84	71
FLATHEAD	75	56
UPPER CLARK FORK	72	50
BITTERROOT	82	54
LOWER CLARK FORK	54	54
MISSOURI	75	49
JEFFERSON	73	47
MADISON	77	49
GALLATIN	77	51
MISSOURI MAINSTEM	72	44
SMITH-JUDITH-MUSSELSHELL	74	50
SUN-TETON-MARIAS	79	52
MILK	43	39
ST. MARY	76	72
YELLOWSTONE	82	54
UPPER YELLOWSTONE	81	55
LOWER YELLOWSTONE	83	54

*NOTE: The **FORECAST AS % OF LAST YEAR** column above, is this years forecast as a percnet of last years forecast, not of what actually occurred.*

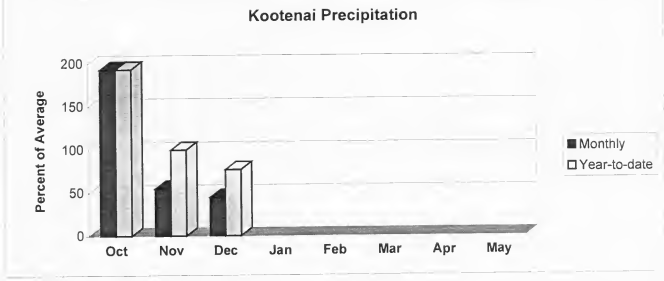
Kootenai River Basin in Montana

Snowpack conditions in the Kootenai River Basin were well below average. Snow water content was 34 percent below average and 64 percent below last year. This is the fifth lowest year of record for the period 1973 through 1997.



January maximum swe was established in 1997 and minimum was in 1977; February maximum swe was in 1997 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1974 and minimum swe was in 1977; May maximum swe was in 1974 and minimum swe was in 1977; and June maximum swe was in 1974 and minimum swe was in 1992. Average is for the period 1961 through 1990.

Mountain precipitation during December was 52 percent below average and 76 percent below last year. Valley precipitation during December was 77 percent below average and 90 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 23 percent below average and 68 percent below last year.



Lake Koocanusa storage on the last day of December was 24 percent above average and 10 percent above last year.

Streamflows are forecast to be 16 percent below average and 29 percent below last year.

KOOTENAI RIVER BASIN in Montana
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ====== Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
TOBACCO RIVER nr Eureka	APR-JUL	26	49	65	49	81	104	133
	APR-SEP	29	56	75	51	94	121	147
LIBBY RES Inflow (1,2)	APR-JUL	3128	4429	5020	87	5611	6912	5779
	APR-SEP	3660	5187	5880	87	6573	8100	6772
FISHER RIVER near Libby	APR-JUL	34	73	100	43	127	166	234
	APR-SEP	42	83	110	44	137	178	250
YAAK RIVER near Troy	APR-JUL	117	184	230	48	276	343	483
	APR-SEP	131	199	245	49	291	359	505
KOOTENAI at Leonia (1,2)	APR-JUL	3783	5411	6150	85	6889	8517	7199
	APR-SEP	4348	6220	7070	85	7920	9792	8275

KOOTENAI RIVER BASIN in Montana
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LAKE KOOCANUSA	5748.0	3774.0	3438.0	3050.0

KOOTENAI RIVER BASIN in Montana
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
KOOTENAY in CANADA	4	55	66
KOOTENAI MAINTSTEM	2	35	69
TOBACCO	3	40	67
FISHER	1	30	67
YAAK	2	32	59
KOOTENAI in MONTANA	8	36	66
ab BONNERS FERRY	12	39	66

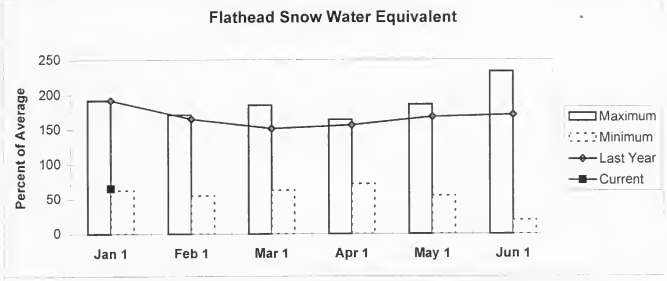
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

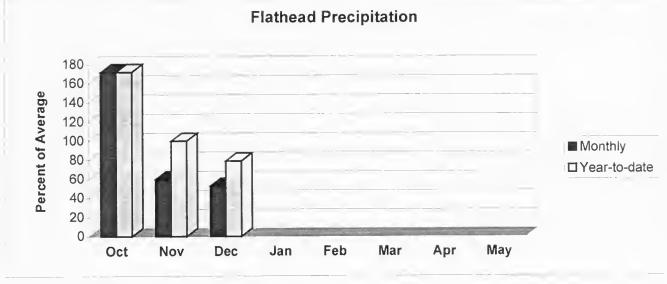
Flathead River Basin

Snowpack conditions in the Flathead River Basin were well below average. Snow water content was 34 percent below average and 66 percent below last year. This is the third lowest year of record for the period 1961 through 1997.



January maximum swe was established in 1997 and minimum was in 1988; February maximum swe was in 1972 and minimum was in 1977; March maximum swe was in 1972 and minimum was in 1977; April maximum swe was in 1972 and minimum was in 1992; May maximum swe was in 1972 and minimum was in 1992; and June maximum swe was in 1974 and minimum was in 1992. Average is for the period 1961 through 1990.

Mountain precipitation during December was 45 percent below average and 72 percent below last year. Valley precipitation during December was 71 percent below average and 86 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 21 percent below average and 55 percent below last year.



Reservoir storage on the last day of December was 9 percent below average and the same as last year. Combined Camas reservoir storage was 75 percent above average and 9 percent above last year; combined Mission Valley reservoir storage was 1 percent above average and 19 percent above last year; Hungry Horse storage was at average and 8 percent above last year; and Flathead Lake storage was 29 percent below average and 18 percent below last year.

Streamflows are forecast to be 25 percent below average and 44 percent below last year.

FLATHEAD RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ====== Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
NF FLATHEAD nr Columbia Falls	APR-JUL	966	1147	1270	76	1393	1574	1662
	APR-SEP	1084	1272	1400	76	1528	1716	1836
MF FLATHEAD nr West Glacier	APR-JUL	904	1110	1250	76	1390	1596	1638
	APR-SEP	1000	1214	1360	76	1506	1720	1788
HUNGRY HORSE Reservoir Inflow (1,2)	APR-JUL	963	1373	1560	76	1747	2157	2051
	APR-SEP	1064	1474	1660	76	1846	2256	2184
FLATHEAD at Columbia Falls (2)	APR-JUL	3058	3714	4160	76	4606	5262	5482
	APR-SEP	3412	4078	4530	76	4982	5648	5960
STILLWATER nr Whitefish	APR-JUL	37	78	105	56	132	173	189
	APR-SEP	41	85	115	55	145	189	209
WHITEFISH nr Kalispell	APR-JUL	34	50	60	58	70	86	104
	APR-SEP	36	53	65	56	77	94	116
SWAN RIVER near Bigfork	APR-JUL	263	339	390	67	441	517	583
	APR-SEP	309	390	445	67	500	581	665
FLATHEAD Lake Inflow (1,2)	APR-JUL	3232	4351	4860	76	5369	6488	6390
	APR-SEP	3608	4751	5270	76	5789	6932	6926

FLATHEAD RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CAMAS (4)	45.2	32.6	29.9	18.6
MISSION VALLEY (8)	100.0	34.3	28.9	33.8
HUNGRY HORSE	3451.0	2579.0	2388.0	2586.0
FLATHEAD LAKE	1791.0	925.5	1132.0	1305.0

FLATHEAD RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
NF FLATHEAD in CANADA	1	24	31
NF FLATHEAD in MT.	6	37	63
MIDDLE FORK FLATHEAD	5	37	67
SOUTH FORK FLATHEAD	6	32	62
STILLWATER-WHITEFISH	4	28	53
SWAN	6	37	70
MISSION VALLEY	3	31	67
LITTLE BITTERROOT-ASHLEY	4	24	52
JOCKO	4	38	78
FLATHEAD in MONTANA	27	35	66
FLATHEAD BASIN	28	34	65

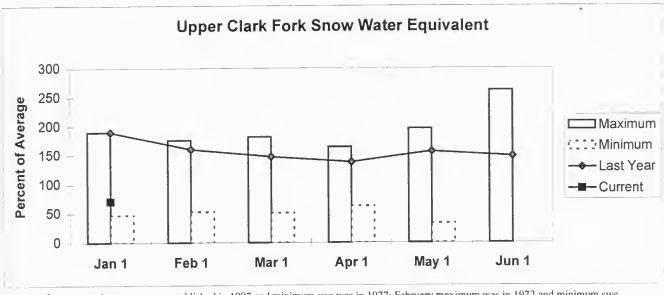
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

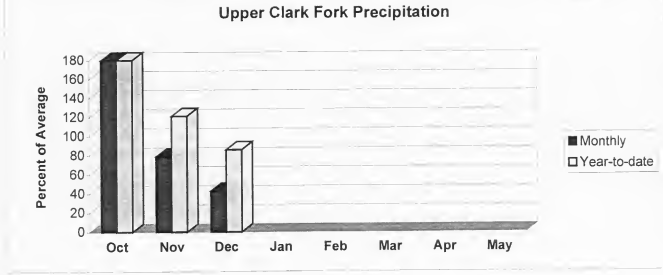
Upper Clark Fork River Basin

Snowpack conditions in the Upper Clark Fork River Basin were below average. Snow water content was 28 percent below average and 63 percent below last year. This is the eighth lowest year of record for the period 1961 through 1997.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1972 and minimum was in 1994; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum swe was in 1975 and minimum swe was in 1987. Average is for the period 1961 through 1990.

Mountain precipitation during December was 55 percent below average and 81 percent below last year. Valley precipitation during December was 80 percent below average and 93 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 14 percent below average and 51 percent below last year.



Reservoir storage on the last day of December was 8 percent above average and 27 percent above last year. Georgetown Lake storage was 1 percent below average and 31 percent above last year; Lower Willow Creek storage was 14 percent above average and 7 percent above last year; and Nevada Creek storage was 64 percent above average and 16 percent above last year.

Streamflows are forecast to be 28 percent below average and 50 percent above last year.

UPPER CLARK FORK RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> 90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WARM SPRINGS CK at Anaconda (2)	APR-JUL	21	30	35	92	41	49	38
	APR-SEP	28	37	43	92	49	58	47
LITTLE BLACKFOOT nr Garrison	APR-JUL	4.2	30	55	66	80	116	83
	APR-SEP	4.4	33	59	66	85	124	89
FLINT CK nr Southern Cross (2)	APR-JUL	2.1	6.2	9.0	63	11.8	15.9	14.2
	APR-SEP	1.8	6.9	10.4	62	13.9	19.0	16.7
FLINT CK bl Boulder Ck	APR-JUL	10.6	26	37	65	48	63	57
	APR-SEP	14.7	34	47	64	60	79	73
LOWER WILLOW CK RES Inflow	APR-JUL	0.6	5.4	8.7	62	12.0	16.8	14.0
	APR-SEP	0.7	5.6	9.0	61	12.4	17.3	14.8
MF ROCK CREEK nr Philipsburg	APR-JUL	32	45	54	82	63	76	66
	APR-SEP	36	50	60	81	70	84	74
ROCK CREEK near Clinton	APR-JUL	134	212	265	90	318	396	296
	APR-SEP	157	242	300	90	358	443	333
NEVADA CREEK near Finn	APR-JUL	3.0	7.8	11.0	58	14.2	19.0	19.1
	APR-SEP	3.7	8.6	12.0	57	15.4	20	21
CLEARWATER nr Clearwater	APR-JUL	68	96	115	67	134	162	172
	APR-SEP	71	100	120	66	140	169	181
BLACKFOOT RIVER near Bonner	APR-JUL	337	491	595	71	699	853	835
	APR-SEP	385	549	660	71	771	935	926
CLARK FORK ab Milltown	APR-JUL	215	406	535	82	664	855	652
	APR-SEP	268	478	620	82	762	972	755
CLARK FORK ab Missoula	APR-JUL	609	925	1140	77	1355	1671	1487
	APR-SEP	714	1057	1290	77	1523	1866	1681

UPPER CLARK FORK RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GEORGETOWN LAKE	31.0	27.7	21.1	27.9
LOWER WILLOW CREEK	4.9	1.6	1.5	1.4
NEVADA CREEK	12.6	6.4	5.5	3.9

UPPER CLARK FORK RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
CLARK FORK ab FLINT CRK	10	43	71
FLINT CREEK	5	40	77
ROCK CREEK	3	45	90
CLARK FORK ab BLACKFOOT	15	41	73
BLACKFOOT	15	32	65
UPPER CLARK FORK BASIN	27	37	71

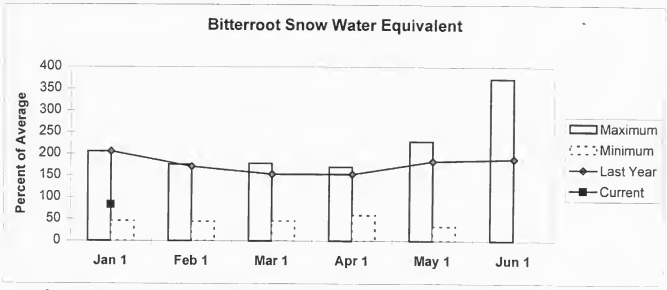
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

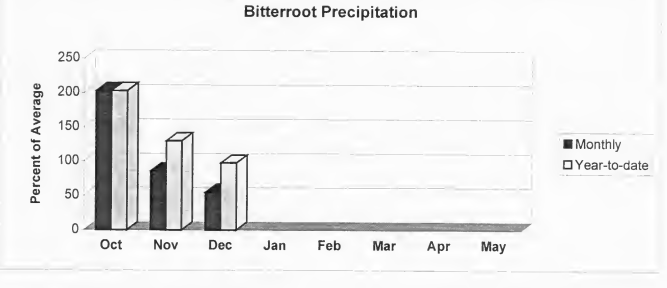
Bitterroot River Basin

Snowpack conditions in the Bitterroot River Basin were below average. Snow water content was 17 percent below average and 60 percent below last year.



January maximum swe was established in 1997 and minimum swe in 1977; February maximum swe was in 1972 and minimum was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1972 and minimum swe was in 1977; May maximum swe was in 1972 and minimum swe was in 1987; and June maximum swe was 1972 and 1974 and minimum swe was in 1987 and 1992. Average is for the period 1961 through 1990.

Mountain precipitation during December was 42 percent below average and 76 percent below last year. Valley precipitation during December was 66 percent below average and 92 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 2 percent below average and 47 percent below last year.



Reservoir storage on the last day of December was 18 percent below average and 42 percent above last year. Painted Rocks Lake storage was 71 percent below average and 23 percent below last year and Como storage was 63 percent above average and 84 percent above last year.

Streamflows are forecast to be 18 percent below average and 46 percent below last year.

BITTERROOT RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<= Drier = Chance Of Exceeding * = 90% (1000AF)	70% (1000AF)	Future Conditions 50% (Most Probable) (1000AF)	(% AVG.)	= Wetter =>> 30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WF BITTERROOT nr Conner (2)	APR-JUL	44	83	110	72	137	176	152
	APR-SEP	47	89	117	71	145	187	166
BITTERROOT nr Darby	APR-JUL	240	350	425	87	500	610	491
	APR-SEP	272	384	460	85	536	648	540
ROCK CK nr Darby (2)	APR-JUL	46	59	68	86	77	90	79
	APR-SEP	48	61	70	84	79	92	83
SKALKAHO CK nr Hamilton	APR-JUL	22	30	36	78	42	50	46
	APR-SEP	25	35	41	77	47	57	53
BURNT FORK CK nr Stevensville (2)	APR-JUL	11.7	18.4	23	79	28	34	29
	APR-SEP	14.5	22	27	79	32	40	34
BITTERROOT at Missoula	APR-JUL	634	893	1070	82	1247	1506	1301
	APR-SEP	740	996	1170	83	1344	1600	1418

BITTERROOT RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
PAINTED ROCKS LAKE	31.7	4.0	5.2	13.9
COMO	34.9	14.7	8.0	9.0

BITTERROOT RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WEST FORK BITTERROOT	2	43	86
EAST SIDE BITTERROOT	3	41	84
WEST SIDE BITTERROOT	3	40	82
BITTERROOT BASIN	7	40	83

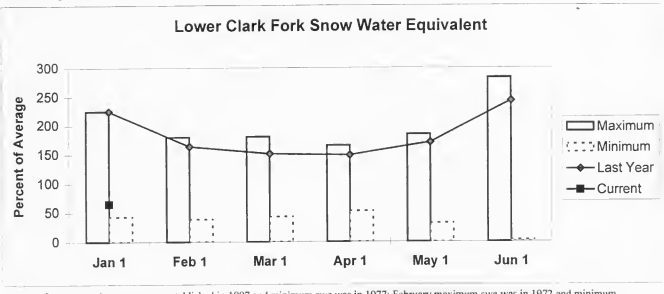
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

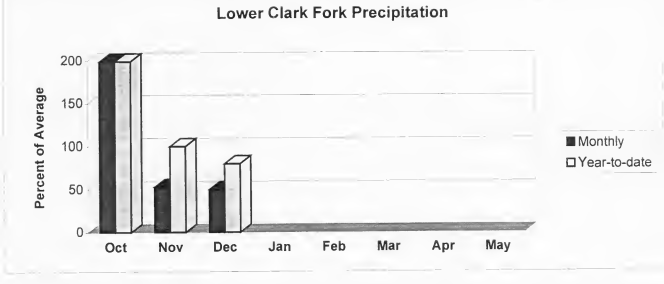
Lower Clark Fork River Basin

Snowpack conditions in the Lower Clark Fork River Basin were well below average. Snow water content was 35 percent below average and 71 percent below last year. This is tied with the second lowest year of record the period 1967 through 1997.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum was in 1977; April maximum swe was in 1972 and minimum swe was in 1981; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum swe was in 1974 and minimum swe was in 1977. Average is for the period 1961 through 1990.

Mountain precipitation during December was 48 percent below average and 79 percent below last year. Valley precipitation during December was 57 percent below average and 82 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 20 percent below average and 56 percent below last year.



Noxon Rapids storage on the last day of December was 3 percent above average and 5 percent above last year.

Streamflows are forecast to be 24 percent below average and 46 percent below last year.

LOWER CLARK FORK RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<===== Drier ===== Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	Future Conditions 50% (Most Probable) (1000AF)	(% AVG.)	======= Wetter =====>> 30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
CLARK FORK ab Missoula	APR-JUL	609	925	1140	77	1355	1671	1487
	APR-SEP	714	1057	1290	77	1523	1866	1681
CLARK FORK bl Missoula	APR-JUL	1267	1828	2210	79	2592	3153	2788
	APR-SEP	1486	2066	2460	79	2854	3434	3099
CLARK FORK at St. Regis (1)	APR-JUL	1074	2343	2920	79	3497	4766	3686
	APR-SEP	1190	2600	3240	79	3880	5290	4095
CLARK FORK nr Plains (1,2)	APR-JUL	3569	6575	7940	76	9305	12311	10450
	APR-SEP	3914	7219	8720	76	10221	13526	11470
THOMPSON RIVER nr Thompson Falls	APR-JUL	20	74	110	51	146	200	214
	APR-SEP	25	81	120	50	159	215	240
PROSPECT CREEK at Thompson Falls	APR-JUL	19.0	48	68	55	88	117	123
	APR-SEP	21	52	72	55	92	123	132
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	3809	7200	8740	75	10280	13671	11730
	APR-SEP	4193	7925	9620	75	11315	15047	12910

LOWER CLARK FORK RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
NOXON RAPIDS	335.0	327.4	312.8	317.1

LOWER CLARK FORK RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
LOWER CLARK FORK	7	29	65
CLARK FORK BASIN	33	34	68
CLARK FK ab PEND ORIELLE	62	34	68
COLUMBIA in MONTANA	65	35	68
COLUMBIA RIVER BASIN	69	35	68

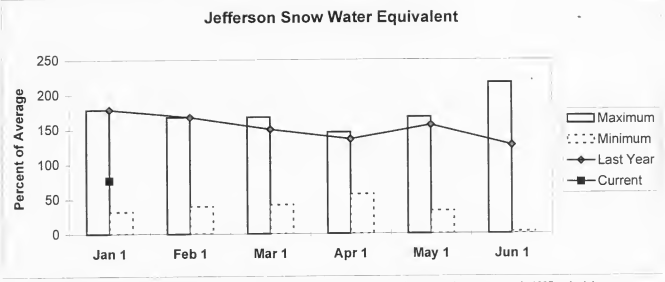
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

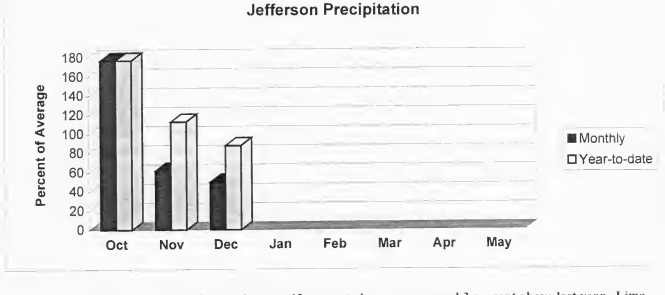
Jefferson River Basin

Snowpack conditions in the Jefferson River Basin were below average. Snow water content was 22 percent below average and 57 percent below last year.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1997 and minimum was in 1977; March maximum swe was in 1972 and minimum was in 1977; April maximum swe was in 1972 and minimum was in 1977; May maximum swe was in 1975 and minimum swe was in 1977; and June maximum swe was in 1982 and minimum in 1987. Average is for the period 1961 through 1990.

Mountain precipitation during December was 53 percent below average and 82 percent below last year. Valley precipitation during December was 4 percent below average and 42 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 12 percent below average and 47 percent below last year.



Reservoir storage on the last day of December was 12 percent above average and 3 percent above last year. Lima storage was 25 percent above average and 2 percent below last year; Clark Canyon storage was 8 percent above average and 2 percent above last year; and Ruby River storage was 20 percent above average and 26 percent above last year.

Streamflows are forecast to be 28 percent below average and 53 percent below last year.

JEFFERSON RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<= Drier = Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	Future Conditions 50% (Most Probable) (1000AF)	(% AVG.)	Wetter =>> 30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
RED ROCK RIVER near Monida (2)	APR-JUL	43	62	75	77	88	108	97
	APR-SEP	41	64	80	76	96	119	105
BEAVERHEAD RIVER near Grant (2)	APR-JUL	53	84	105	80	126	157	132
	APR-SEP	62	100	125	81	150	188	155
BEAVERHEAD RIVER at Barretts (2)	APR-JUL	80	113	135	79	157	190	172
	APR-SEP	106	141	165	81	189	224	203
RUBY RIVER near Alder	APR-JUL	31	50	63	76	76	95	83
	APR-SEP	39	60	75	76	90	112	99
BIG HOLE RIVER near Melrose	APR-JUL	226	371	470	73	569	714	641
	APR-SEP	249	405	510	73	615	771	697
BOULDER RIVER near Boulder	APR-JUL	26	49	65	77	81	104	85
	APR-SEP	28	53	70	77	87	112	91
WILLOW CREEK near Harrison	APR-JUL	3.4	10.6	15.5	88	20	28	17.7
	APR-SEP	3.4	11.8	17.5	88	23	32	20
JEFFERSON RIVER near Three Forks (2)	APR-JUL	254	490	650	66	810	1046	985
	APR-SEP	291	543	715	71	887	1139	1012

JEFFERSON RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LIMA	84.0	40.5	41.2	32.4
CLARK CANYON	255.6	152.9	150.0	142.1
RUBY RIVER	38.8	24.2	19.2	20.2

JEFFERSON RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
BEAVERHEAD	8	40	73
RUBY	4	46	70
BIGHOLE	9	45	82
BOULDER	5	49	81
JEFFERSON RIVER BASIN	21	43	77

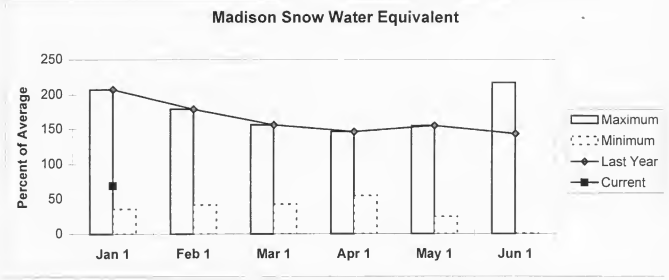
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

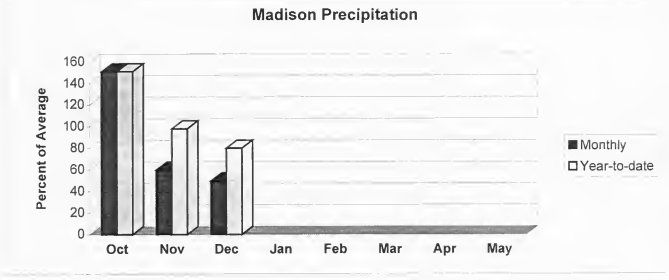
Madison River Basin

Snowpack conditions in the Madison River Basin were well below average. Snow water content was 31 percent below average and 67 percent below last year. This is the sixth lowest of record for the period 1967 through 1997.



January maximum swe was established in 1997 and minimum swe was in 1977; February maximum swe was in 1997 and minimum was in 1977; March maximum swe was in 1997 and minimum was in 1977; April maximum swe was in 1997 and minimum was in 1977; May maximum swe was in 1997 and minimum swe was in 1977; and June maximum swe was in 1995 and minimum in 1987. Average is for the period 1961 through 1990.

Mountain and valley precipitation during December was 50 percent below average and 82 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 20 percent below average and 56 percent below last year.



Reservoir storage on the last day of December was 13 percent above average and 7 percent above last year. Ennis Lake storage was 11 percent below average and 7 percent below last year and Hebgen Lake storage was 16 percent above average and 8 percent above last year.

Streamflows are forecast to be 23 percent below average and 51 percent below last year.

MADISON RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>>						30-Yr Avg. (1000AF)
		Chance Of Exceeding *						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
MADISON RIVER near Grayling (2)	APR-JUL	225	270	300	79	330	375	380
	APR-SEP	297	349	385	79	421	473	486
MADISON RIVER near McAllister (2)	APR-JUL	377	453	505	76	557	633	662
	APR-SEP	508	593	650	78	707	792	831

MADISON RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
ENNIS LAKE	41.0	29.9	32.1	33.7
HEBGEN LAKE	377.5	286.1	263.8	246.8

MADISON RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	This Year as % of Average
MADISON abv HEBGEN LAKE	6	28	64
MADISON blw HEBGEN LAKE	7	40	74
MADISON RIVER BASIN	13	33	69

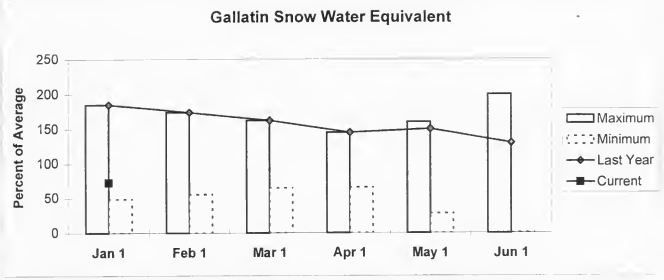
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

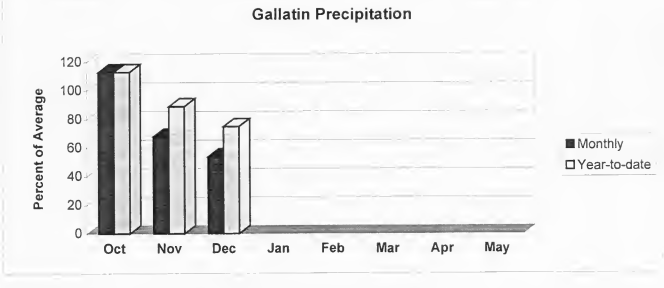
Gallatin River Basin

Snowpack conditions in the Gallatin River Basin were below average. Snow water content was 27 percent below average and 60 percent below last year. This is the fifth lowest year of record for the period 1966 through 1997.



January maximum swe was established in 1997 and minimum swe was in 1966; February maximum swe was in 1997 and minimum was in 1981; March maximum swe was in 1997 and minimum was in 1977 and 1987; April maximum swe was in 1997 and minimum was in 1987; May maximum swe was in 1970 and minimum swe was in 1987; and June maximum swe was in 1975 and minimum in 1987. Average is for the period 1961 through 1990.

Mountain precipitation during December was 47 percent below average and 77 percent below last year. Valley precipitation during December was 34 percent below average and 70 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 25 percent below average and 55 percent below last year.



Middle Creek storage on the last day of December was 168 percent above average and 17 percent below last year.

Streamflows are forecast to be 23 percent below average and 49 percent below last year.

GALLATIN RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<= Drier = Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	Future Conditions 50% (Most Probable) (1000AF)	(% AVG.)	=Wetter =>> 30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
GALLATIN RIVER near Gateway	APR-JUL	253	311	350	79	389	447	441
	APR-SEP	308	372	415	80	458	522	518
E & W FK HYALITE CREEK near Bozeman	APR-JUL	13.4	17.0	19.5	85	22	26	23
	APR-SEP	15.5	19.4	22	85	25	29	26
HYALITE CREEK nr Bozeman (2)	APR-JUL	20	26	31	85	35	41	36
	APR-SEP	24	30	35	83	40	46	42
GALLATIN RIVER at Logan (2)	APR-JUL	196	297	365	73	433	534	498
	APR-SEP	258	363	435	75	507	612	581

GALLATIN RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MIDDLE CREEK	10.2	5.7	6.9	3.4

GALLATIN RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
UPPER GALLATIN	4	37	74
HYALITE	2	58	82
BRIDGER	2	34	64
GALLATIN RIVER BASIN	8	40	74
MISSOURI HEADWATERS	36	38	73

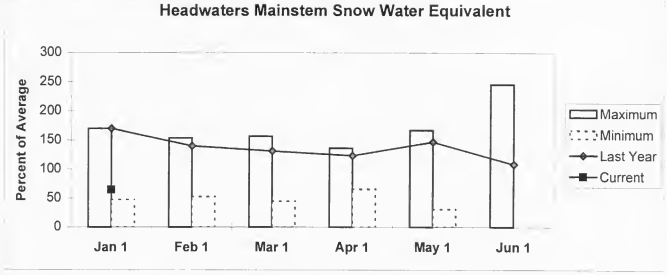
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

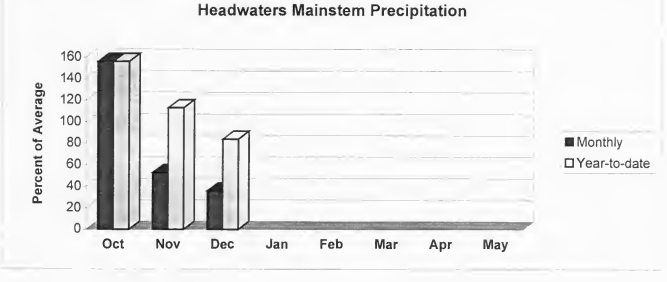
Missouri Mainstem River Basin

Snowpack conditions in the Headwaters Missouri Mainstem River Basin were well below average. Snow water content was 35 percent below average and 62 percent below last year. This is the sixth lowest year of record for the period 1961 through 1997.



January maximum swe was established in 1997 and minimum swe in 1977; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe in 1972 and minimum swe was in 1977; April maximum swe was in 1972 and minimum swe was in 1961; May maximum swe was in 1975 and minimum swe was in 1977; and June maximum swe was in 1982 and minimum swe was in 1992. Average is for the period 1961 through 1990.

Mountain precipitation during December was 60 percent below average and 82 percent below last year. Valley precipitation during December was 79 percent below average and 88 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 16 percent below average and 43 percent below last year.



Reservoir storage on the last day of December was 5 percent above average and 7 percent above last year. Canyon Ferry Lake storage was 5 percent above average and 7 percent above last year; Helena Valley storage was 8 percent below average and 6 percent below last year; Lake Helena storage was 5 percent above average and the same as last year; Hauser & Helena storage was 2 percent above average and the same as last year; Holter Lake storage was 6 percent above average and 5 percent above last year; and Fort Peck Lake storage was 2 percent above average and the same as last year.

Streamflows are forecast to be 28 percent below average and 56 percent below last year.

MISSOURI MAINSTEM RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
MISSOURI RIVER at Toston (2)	APR-JUL	772	1238	1555	75	1872	2338	2075
	APR-SEP	1063	1457	1790	74	2123	2513	2416
PRICKLY PEAR CREEK near Clancy	APR-JUL	2.0	13.0	21	89	28	39	23
	APR-SEP	3.4	15.7	24	89	32	45	27
SUN RIVER at Gibson Dam (2)	APR-JUL	203	314	390	82	466	577	478
	APR-SEP	234	351	430	82	509	626	526
MISSOURI RIVER at Fort Benton (2)	APR-JUL	966	1731	2250	73	2769	3534	3087
	APR-SEP	1618	2090	2640	72	3190	4046	3678
MARIAS RIVER near Shelby (2)	APR-JUL	62	219	325	73	431	588	447
	APR-SEP	78	237	345	71	453	612	487
MISSOURI RIVER at Virgelle (2)	APR-JUL	835	1886	2600	72	3314	4365	3595
	APR-SEP	1982	2294	3000	71	3706	5103	4217
MISSOURI RIVER near Landusky (2)	APR-JUL	1470	2292	2850	73	3408	4230	3897
	APR-SEP	2153	2570	3300	72	4030	5679	4580
MISSOURI RIVER below Fort Peck (2)	APR-JUL	974	2061	2800	70	3539	4626	4015
	APR-SEP	1921	2219	3160	71	4101	5494	4467
LAKE SAKAKAWEA Inflow (2)	APR-JUL	4500	6420	7725	78	9030	10950	9897
	APR-SEP	5219	7170	8760	77	10350	13502	11346

MISSOURI MAINSTEM RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
CANYON FERRY LAKE	2043.0	1780.0	1657.0	1690.0
HELENA VALLEY	9.2	4.7	5.0	5.1
LAKE HELENA	10.4	10.9	10.9	10.4
HAUSER & HELENA	61.9	63.1	63.1	61.7
HOLTER LAKE	81.9	81.1	77.1	76.7
FORT PECK LAKE (MAF)	18.9	15.4	15.4	15.1

MISSOURI MAINSTEM RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
MISSOURI MAINSTEM	9	38	65
SMITH-JUDITH-MUSSELSHELL	9	36	61
SUN-TETON-MARIAS	7	34	66
MISSOURI abv FT PECK	24	36	64
MILK RIVER BASIN	6	21	32
MISSOURI MAINSTEM BASIN	29	35	61

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

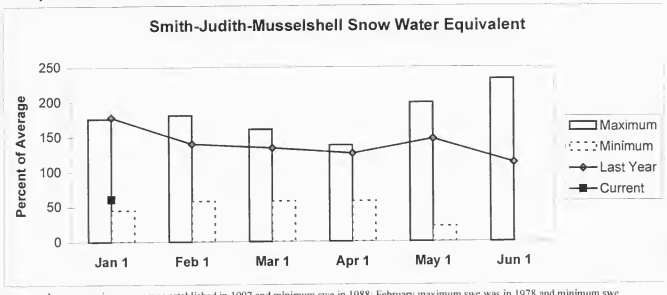
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Smith-Judith-Musselshell River Basins

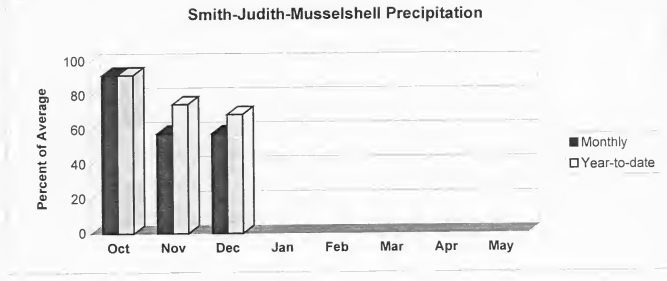
Snowpack conditions in the Smith-Judith-Musselshell River Basins were well below average. Snow water content was 39 percent below average and 64 percent below last year. This is the third lowest year of record for the period 1961 through 1997.

Snow water content in the Smith River Basin was 36 percent below average and 64 percent below last year; in the Judith River Basin was 38 percent below average and 59 percent below last year; and in the Musselshell Basin River was 47 percent below average and 68 percent below last year.



January maximum swe was established in 1997 and minimum swe in 1988; February maximum swe was in 1978 and minimum swe was in 1987; March maximum swe was in 1978 and minimum swe was in 1987; April maximum swe was in 1970 and minimum swe was in 1992; and May maximum swe was in 1970 and minimum swe was in 1987; and June maximum swe was in 1982 and minimum swe was in 1992. Average is for the period 1961 through 1990.

Mountain and valley precipitation during December in the Smith-Belts was 53 percent below average and 83 percent below last year; in the Judith was 28 percent below average and 62 percent below last year; and in the Musselshell was 55 percent below average and 83 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 31 percent below average and 55 percent below last year.



Reservoir storage on the last day of December was 55 percent above average and 55 percent above last year. Smith River storage was 37 percent above average and 50 percent above last year; Bair storage was 5 percent above average and 86 percent above last year; Martinsdale storage was 85 percent above average and 72 percent above last year; and Deadman's Basin was 56 percent above average and 50 percent above last year.

Streamflows are forecast to be 26 percent below average and 50 percent below last year.

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ======		Future Conditions ====== Wetter ======>>				30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	Chance Of Exceeding * 50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
SHEEP CREEK nr White Sulphur Springs	APR-JUL	8.0	11.0	13.0	72	15.0	18.0	18.1
	APR-SEP	10.1	13.3	15.5	74	17.7	21	21
SMITH RIVER blw Eagle Creek	APR-JUL	29	57	77	75	97	125	103
	APR-SEP	39	72	95	77	118	151	124
NF MUSSELSHELL near Delpine	APR-JUL	0.48	2.19	3.35	70	4.51	6.22	4.80
	APR-SEP	0.59	2.50	3.80	68	5.10	7.01	5.60
SF MUSSELSHELL abv Martinsdale	APR-JUL	2.3	24	39	75	54	76	52
	APR-SEP	3.8	27	42	75	57	80	56

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
SMITH RIVER	10.6	8.1	5.4	5.9
NEWLAN CREEK		NO REPORT		
BAIR	7.0	3.9	2.1	3.7
MARTINSDALE	23.1	17.0	9.9	9.2
DEADMAN'S BASIN	72.2	62.8	42.0	40.3

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SMITH	4	36	64
JUDITH	5	41	62
MUSSELSHELL	4	32	53
SMITH-JUDITH-MUSSELSHELL	9	36	61

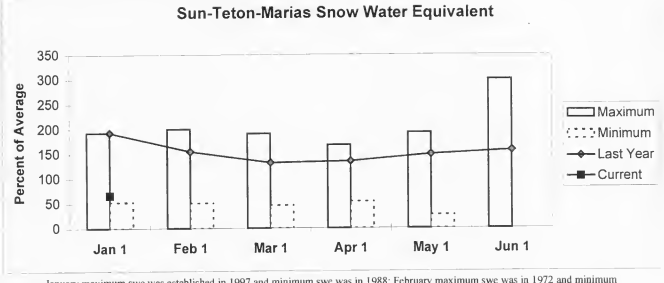
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

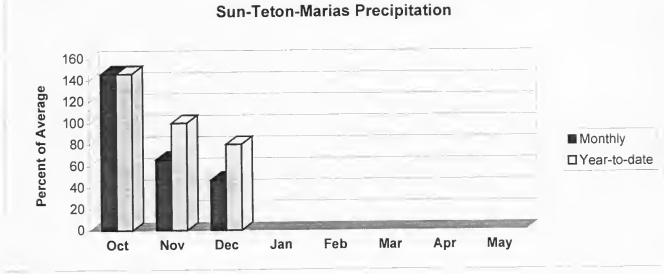
Sun-Teton-Marias River Basins

Snowpack conditions in the Sun-Teton-Marias River Basins were well below average. Snow water content was 34 percent below average and 66 percent below last year. This is the third lowest year of record for the period 1969 through 1997. Snow water content in the Sun River Basin was 29 percent below average and 63 percent below last year; in the Teton River Basin was 32 percent below average and 63 percent below last year; and in the Marias River Basin was 37 percent below average and 67 percent below last year.



January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 1984; April maximum swe was in 1972 and minimum swe was in 1984; May maximum swe was in 1972 and minimum swe was in 1977; and June maximum was in 1982 and minimum swe was in 1992. Average is for the period 1961 through 1990.

Mountain and valley precipitation during December in the Sun was 73 percent below average and 89 percent below last year; in the Teton was 53 percent below average and 78 percent below last year; and in the Marias was 49 percent below average and 75 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 20 percent below average and 49 percent below last year.



Reservoir storage on the last day of December was 29 percent above average and 13 percent above last year. Gibson storage was 10 percent above average and 33 percent above last year; Pishkun storage was 10 percent above average and 1 percent above last year; Willow Creek storage was 44 percent above average and 512 percent above last year ; Lower Two Medicine Lake storage was 83 percent above average and 198 percent above last year; Four Horns Lake storage was 12 percent below average and 11 percent below last year; Swift storage was 11 percent above average and 17 percent above last year; Lake Frances storage was 6 percent above average and 4 percent above last year; and Lake Elwell (Tiber) storage was 34 percent above average and 9 percent above last year.

Streamflows are forecast to be 21 percent below average and 48 percent below last year.

SUN-TETON-MARIAS RIVER BASINS
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ====== Wetter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SUN RIVER at Gibson Dam (2)	APR-JUL	203	314	390	82	466	577	478
	APR-SEP	234	351	430	82	509	626	526
TWO MEDICINE RIVER near Browning (2)	APR-JUL	71	130	170	79	210	269	215
	APR-SEP	81	140	180	79	220	279	228
BADGER CREEK near Browning (2)	APR-JUL	44	72	90	87	108	136	104
	APR-SEP	56	85	105	88	125	154	120
SWIFT RESERVOIR Inflow near Dupuyer	APR-JUL	23	45	60	88	75	97	68
	APR-SEP	32	55	70	88	86	108	80
DUPUYER CREEK near Valier	APR-JUL	0.8	5.0	12.5	81	20	31	15.5
	APR-SEP	0.9	6.1	14.0	81	22	34	17.4
CUT BANK CREEK at Cut Bank	APR-JUL	24	50	68	78	86	112	87
	APR-SEP	29	57	75	78	94	121	96
MARIAS RIVER near Shelby (2)	APR-JUL	62	219	325	73	431	588	447
	APR-SEP	78	237	345	71	453	612	487

SUN-TETON-MARIAS RIVER BASINS
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
GIBSON	99.1	45.1	33.9	41.0
PISHKUN	32.0	19.7	19.6	17.9
WILLOW CREEK	32.2	30.0	4.9	20.8
LOWER TWO MEDICINE LAKE	11.9	11.9	4.0	6.5
FOUR HORNS LAKE	19.2	10.9	12.3	12.4
SWIFT	30.0	15.3	13.1	13.8
LAKE FRANCES	112.0	74.0	71.4	69.6
LAKE ELWELL (TIBER)	1347.0	789.0	723.6	590.6

SUN-TETON-MARIAS RIVER BASINS
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
SUN	2	37	71
TETON	3	37	68
MARIAS	4	33	63
SUN-TETON-MARIAS	7	34	66

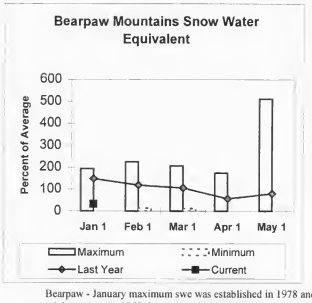
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

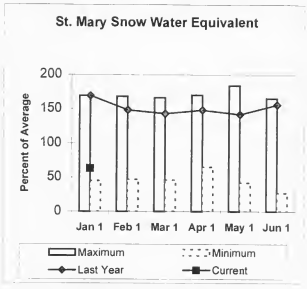
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

St. Mary and Milk River Basins

Snowpack conditions in the St. Mary and Milk River Basins were well below average. Snow water content in the Saint Mary River Basin was 37 percent below average and 63 percent below last year. This is the fourth lowest year of record for the period 1961 through 1997. The Milk River Basin (Bearpaw Mountains) was 68 percent below average and 79 percent below last year. This is the fourth lowest year of record for the period 1973 through 1997.

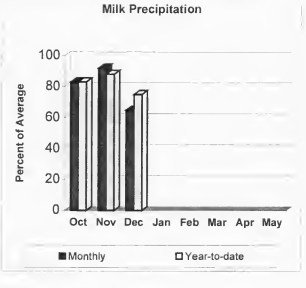


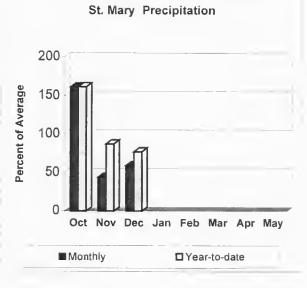


Bearpaw - January maximum swe was established in 1978 and minimum swe was in 1981; February maximum swe was 1978 and minimum was in 1973; March maximum swe was 1978 and minimum swe was 1981; April maximum swe was in 1975 and minimum swe was in 1983; May maximum swe wa 1975 and the minimum has ocurred in several years. Average is for the period 1961 through 1990.

St. Mary - January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1972 and minimum swe was in 1977; March maximum swe was in 1972 and minimum swe was in 1977; April maximum swe was in 1972 and minimum swe was in 1992; May maximum swe was in 19972 and minimum swe was in 1977; and June maximum swe was in 1991 and minimum swe was 1992. Average is for the period 1961 through 1990.

Mountain and valley precipitation in the St. Mary River Basin during December was 41 percent below average and 61 percent below last year; and in the Milk River Basin during December was 35 percent below average and 54 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 24 percent below average and 42 percent below last year.





Reservoir storage on the last day of December was 16 percent above average and 7 percent above last year. Lake Sherburne storage was 21 percent above average and 11 percent above last year; Fresno storage was 1 percent below average and 19 percent below last year; Beaver Creek storage was 28 percent above average and 18 percent below last year; and Nelson storage was 37 percent above average and 54 percent above last year.

Streamflows in the St. Mary are forecast to be 24 percent below average and 28 percent below last year; and in the Milk are forecast to be 57 percent below average and 61 percent below last year.

ST. MARY and MILK RIVER BASINS
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ====== Watter ======>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SWIFTCURRENT CREEK at Sherburne (2)	APR-JUL	59	73	82	77	91	105	107
	APR-SEP	72	86	96	77	106	120	125
ST. MARY RIVER near Babb	APR-JUL	238	275	300	76	325	362	395
	APR-SEP	283	326	355	77	384	427	463
ST. MARY RIVER at US/CAN Border (2)	APR-JUL	256	315	355	77	395	454	462
	APR-SEP	305	370	415	77	460	525	539
MILK RIVER at Western Crossing	MAR-JUL	3.9	15.3	23	52	31	42	44
	MAR-SEP	10.5	16.4	24	52	32	54	46
MILK RIVER at Eastern Crossing (2)	MAR-JUL	0.8	3.5	26	33	49	82	80
	MAR-SEP	0.9	6.2	30	34	54	89	88
BEAVER CREEK near Havre	MAR-JUL	0.5	4.4	8.3	81	12.2	18.0	10.3

ST. MARY and MILK RIVER BASINS
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
LAKE SHERBURNE	64.3	25.6	23.0	21.1
FRESNO	127.0	52.6	64.8	53.1
BEAVER CREEK	3.5	2.3	2.8	1.8
NELSON	66.8	52.1	33.9	38.0

ST. MARY and MILK RIVER BASINS
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
ST. MARY	2	37	63
BEARPAW MOUNTAINS	6	21	32
CYPRESS HILLS, CANADA	0	0	0
MILK RIVER BASIN	6	21	32
ST. MARY & MILK BASINS	8	33	53

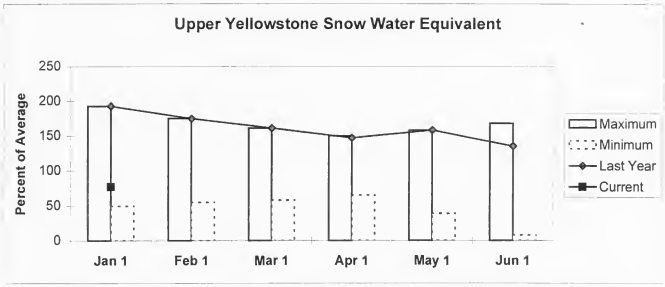
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

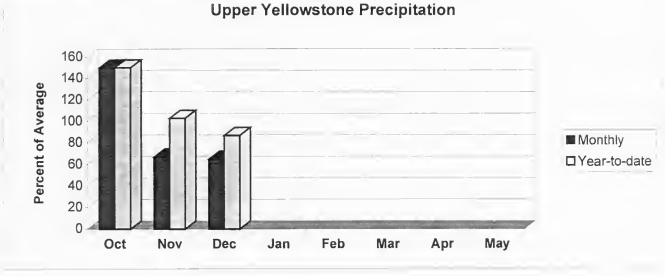
Upper Yellowstone River Basin

Snowpack conditions in the Upper Yellowstone River Basin were well below average. Snow water content was 22 percent below average and 60 percent below last year.



January maximum swe was established in 1997 and minimum swe was in 1988; February maximum swe was in 1997 and minimum swe was in 1977; March maximum swe was in 1997 and minimum swe was in 1977; April maximum swe was in 1971 and minimum swe was in 1981; May maximum swe was in 1997 and minimum swe was in 1987; and June maximum swe was 1982 and minimum swe was in 1987 and 1994. Average is for the period 1961 through 1990.

Mountain precipitation during December was 35 percent below average and 75 percent below last year. Valley precipitation during December was 28 percent below average and 67 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 13 percent below average and 51 percent below last year.



Reservoir storage on the last day of December was at average and 4 percent below last year. Mystic Lake storage was 41 percent below average and 17 percent below last year and Cooney storage was 34 percent above average and 2 percent above last year.

Streamflows are forecast to be 19 percent below average and 45 percent below last year.

UPPER YELLOWSTONE RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<====== Drier ====== Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	Future Conditions 50% (Most Probable) (1000AF)	(% AVG.)	======= Wetter =====>> 30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
YELLOWSTONE at Lake Outlet	APR-JUL	291	386	450	79	514	609	573
	APR-SEP	419	547	635	80	723	851	792
YELLOWSTONE RIVER at Corwin Springs	APR-JUL	932	1127	1260	78	1393	1588	1609
	APR-SEP	1126	1364	1525	79	1686	1924	1937
YELLOWSTONE RIVER near Livingston	APR-JUL	1050	1288	1450	78	1612	1850	1855
	APR-SEP	1286	1568	1760	79	1952	2234	2241
SHIELDS RIVER near Livingston	APR-JUL	62	102	130	80	158	198	162
	APR-SEP	75	117	145	81	173	215	179
BOULDER RIVER at Big Timber	APR-JUL	178	221	250	75	279	322	335
	APR-SEP	196	240	270	74	300	344	364
WEST ROSEBUD CREEK near Roscoe (2)	APR-JUL	38	47	52	85	58	66	61
	APR-SEP	51	61	67	85	73	83	79
STILLWATER RIVER nr Absarokee (2)	APR-JUL	267	364	430	86	496	593	498
	APR-SEP	336	440	510	86	580	684	593
CLARKS FORK RIVER near Belfry	APR-JUL	284	368	425	80	482	566	532
	APR-SEP	310	402	465	79	528	620	590
COONEY RESERVOIR INFLOW (2)	APR-JUL	10.4	28	40	85	52	70	47
	APR-SEP	19.2	37	49	86	61	79	57
YELLOWSTONE RIVER at Billings (2)	APR-JUL	2093	2636	3005	84	3374	3917	3577
	APR-SEP	2484	3091	3500	83	3909	4548	4211

UPPER YELLOWSTONE RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MYSTIC LAKE	21.0	6.8	8.2	11.6
COONEY	27.4	18.8	18.4	14.0

UPPER YELLOWSTONE RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
YELLOWSTONE ab LIVINGSTON	14	38	76
SHIELDS	4	37	73
BOULDER-STILLWATER	3	44	78
CLARK'S FORK-ROCK CREEK	9	43	82
UPPER YELLOWSTONE RIVER	26	40	77

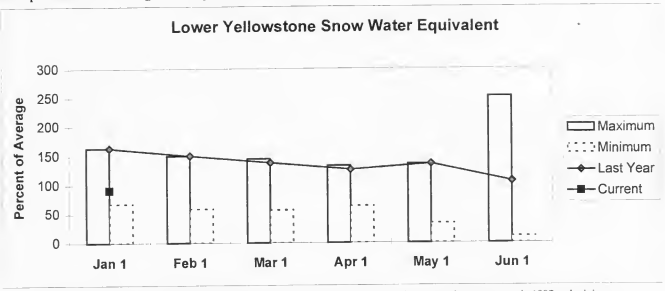
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

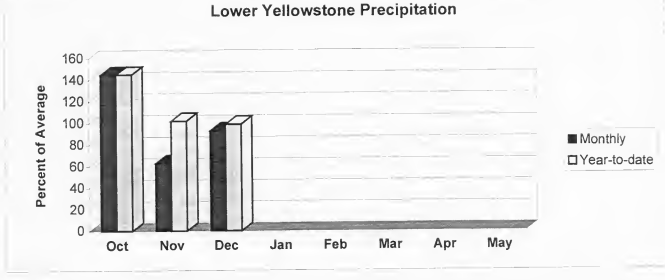
Lower Yellowstone River Basin

Snowpack conditions in the Lower Yellowstone River Basin, in Wyoming, were near average. Snow water content was 9 percent below average and 44 percent below last year.



January maximum swe was established in 1997 and minimum swe was in 1981; February maximum swe was in 1997 and minimum swe was in 1981; March maximum swe was in 1986 and minimum swe was in 1977; April maximum swe was in 1986 and minimum swe was in 1981; May maximum swe was in 1997 and minimum swe was in 1981; and June maximum swe was in 1995 and minimum swe was in 1994. Average is for the period 1961 through 1990.

Mountain and valley precipitation during December was 7 percent below average and 58 percent below last year. Mountain and valley water year precipitation, beginning October 1, 1997, was 1 percent below average and 33 percent below last year.



Reservoir storage on the last day of December was 6 percent above average and 6 percent above last year. Bighorn Lake storage was at 8 percent above average and 8 percent above last year and Tongue River storage was 77 percent below average and 65 percent below last year (The Tongue Dam is under construction and will be below average storage through construction).

Streamflows are forecast to be 17 percent below average and 46 percent below last year.

LOWER YELLOWSTONE RIVER BASIN
Streamflow Forecasts - January 1, 1998

Forecast Point	Forecast Period	<<= Drier = Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	Future Conditions 50% (Most Probable) (1000AF)	(% AVG.)	Wetter =>> 30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
YELLOWSTONE RIVER at Billings (2)	APR-JUL	2093	2636	3005	84	3374	3917	3577
	APR-SEP	2484	3091	3500	83	3909	4548	4211
BIGHORN RIVER nr St. Xavier (2)	APR-JUL	868	1143	1330	81	1517	1792	1645
	APR-SEP	736	1218	1440	80	1662	2027	1794
LITTLE BIGHORN RIVER nr Hardin	APR-JUL	13.0	71	110	79	149	207	140
	APR-SEP	19.0	82	125	80	168	231	157
TONGUE RIVER stateline nr Decker (2)	APR-JUL	120	173	210	91	247	300	230
	APR-SEP	142	197	235	92	273	328	256
YELLOWSTONE RIVER at Miles City (2)	APR-JUL	2971	3882	4500	83	5118	6029	5431
	APR-SEP	3203	4412	5140	82	5868	6972	6281
POWDER RIVER at Moorhead	APR-JUL	2.0	60	100	47	140	198	211
	APR-SEP	6.0	65	105	45	145	204	232
POWDER RIVER near Locate	APR-JUL		62	105	42	148	211	252
	APR-SEP	3.0	66	115	42	164	237	276
YELLOWSTONE RIVER nr Sidney (2)	APR-JUL	3250	4292	5000	84	5708	6750	5925
	APR-SEP	3339	4810	5655	83	6500	7904	6814

LOWER YELLOWSTONE RIVER BASIN
Reservoir Storage (1000 AF) - End of December

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BIGHORN LAKE	1356.0	964.8	894.3	891.8
TONGUE RIVER	68.0	6.0	17.3	26.0

LOWER YELLOWSTONE RIVER BASIN
Watershed Snowpack Analysis - January 1, 1998

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
WIND RIVER (Wyoming)	11	51	91
SHOSHONE RIVER (Wyoming)	6	45	85
BIGHORN RIVER (Wyoming)	15	56	91
LITTLE BIGHORN (Wyoming)	2	80	90
TONGUE RIVER (Wyoming)	5	75	95
POWDER RIVER (Wyoming)	5	61	82
LOWER YELLOWSTONE RIVER	28	56	91
YELLOWSTONE BASIN	50	48	85

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

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Montana
Basin Outlook Report

Natural Resources Conservation Service
Bozeman, MT